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(54) Title: FAST SWITCHING LIQUID CRYSTAL COMPOSITIONS FOR USE IN BISTABLE LIQUID CRYSTAL DEVICES

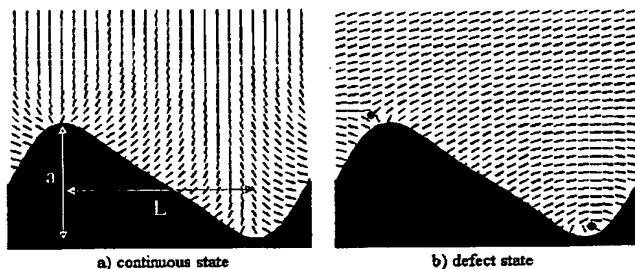
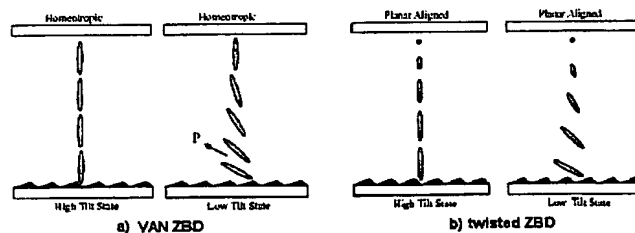


Illustration of zenithal bistability using grating alignment
(with the lines indicating the local director) showing a) the high tilt
(continuous) and b) the low tilt (defect) states.



The a) VAN and b) TN geometries for ZBD showing the
director distribution of the high and low tilt states.

(57) Abstract: The invention is directed to the use of a fast switching liquid crystal composition said composition comprising at least 30 weight% of a component (α) containing one or more compounds having a dielectric anisotropy $\Delta\epsilon$ of at least 25, whereby at least 25 weight% of said compounds have a dielectric anisotropy $\Delta\epsilon$ of at least 40; and at least 5 weight% of a component (δ) containing one or more compounds having a ratio of γ_1/T_{NI}^K of 0.51 mPa-s/K or less, a clearing point T_{NI} of at least 100°C and a rotational viscosity γ_1 of not more than 190 mPa-s (wherein γ_1 is the rotational viscosity at 20 °C in mPa-s and T_{NI}^K is the clearing point in degrees Kelvin); in a bistable liquid crystal device and especially in a zenithal bistable nematic liquid crystal device, a nematic liquid crystal medium, and a bistable liquid crystal device comprising said fast switching liquid crystal composition.



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